

Title: San Francisco Bay/Sacramento-San Joaquin Delta Estuary (Delta)

Background: The Delta, the hub of California's water supply system, is formed by the confluence of the state's two largest rivers: the Sacramento flowing south from its headwaters near Mt. Shasta and the San Joaquin flowing north from its origins high in the southern Sierra Nevada. The 1100 square mile Delta is a web of 60 reclaimed islands protected by earthen levees and approximately 700 miles of waterways. The Delta watershed drains nearly 50% of the state's runoff and supports 80% of California's commercial salmon fishery. The Delta is important habitat for fish, wildlife, and waterfowl, including several threatened and endangered fish species.

Pumps in the south Delta operated by the State and federal government divert 20 to 70% of natural flow to the Central Valley and Southern California, supplying a portion of the drinking water for 24 million Californians and water for more than 1,800 agricultural users who produce half the nation's fruits and vegetables. Water that is not diverted in or upstream of the Delta flows through San Francisco Bay to the Pacific Ocean. EPA has long been involved in efforts to protect and restore Delta water quality. A three-year drought (2007-2010) exacerbated perennial water supply and fishery conflicts and intensified endangered species litigation related to water project operations. These issues, plus the ongoing risks posed by levee instability, increasing urbanization, climate change and earthquakes led State and federal policy makers to again initiate new processes to "fix the Delta".

Question: What efforts by EPA are underway to protect water quality in the Delta?

Answer:

- EPA committed in the Interim Federal Action Plan to "assess the effectiveness of the current regulatory mechanisms designed to protect water quality in the Delta". In February 2011, EPA initiated this assessment through an Advanced Notice of Proposed Rulemaking. The ANPR outlined the most critical Delta water quality issues and their current regulatory framework, and solicited input on how best to address these issues. A follow-up report will be issued in early 2012 synthesizing public input and recommending priority actions.
- In 2012, Region 9 will draft new site-specific selenium water quality criteria for the San Francisco Bay and Delta reflecting the most recent science on bioaccumulation of selenium in Bay-Delta species.
- EPA is supporting the State and Regional Water Boards as they address the breadth of water quality and habitat degradation concerns in the Delta. The Water Boards have taken several key actions in the Delta, including upgrading NPDES permits and approving TMDLs. In 2012, the State will initiate an update to water quality standards in the Delta to protect estuarine habitat and fish migration.
- Since 2006, the major water districts dependent on the Delta have been

developing a Habitat Conservation Planning effort (the Bay Delta Conservation Plan, or BDCP) with the California Departments of Water Resources and Fish & Game, the U.S. Department of Interior (FWS and BOR) and NOAA-Fisheries to address endangered species concerns and seek water supply assurances. The BDCP will propose a controversial new conveyance facility to shift most diversions from the south Delta to the north Delta in an attempt to reverse the decline of several beneficial uses and add stability to water operations.

The State and Federal agencies are preparing a DEIR/S on the BDCP; EPA is a cooperating agency and the project will require CWA 404 permits. The DEIR/S has an ambitious schedule, calling for public release in 2012 along with a major announcement by Governor Brown and Secretary Salazar in July. EPA has provided input to ensure that key water quality issues are adequately considered in the analysis of alternatives. We are also developing an MOU with the Corps of Engineers and the lead BDCP agencies integrating CWA 404 permitting steps into the overall BDCP process.

Title: California's Impaired Waters – 303(d) List

Background: Of the total 3 million acres of lakes, bays, estuaries and wetlands in California, 1.6 million acres are not meeting water quality goals, and of these waterbodies, 1.4 million acres still need a TMDL. Of the total 215,000 miles of rivers, streams and shoreline, 30,000 miles are not meeting water quality goals and of these 20,000 miles still need a TMDL. While more than 50% of the lakes, bays, estuaries and wetlands acres have been assessed, less than 20% of the coastline, rivers and stream miles have been assessed. California reviewed over 22,000 data sets in developing the 2008-2010 list, seven times the number reviewed for the prior list. This increase is due to a more thorough review of existing data as well as the gathering of new water quality information.

Question: What has changed in the 2008/2010 California 303(d) list of impaired waters compared to previous lists and what efforts are being made to address the impairments?

Answer:

- Toxicity listings have increased 170% from 2006 to 2010. Often only certain pollutants are measured when sampling water quality to determine toxicity. However, toxicity testing provides very useful information on whether aquatic organisms are experiencing reduced growth or survival by pollutants in a water body acting singularly or cumulatively.
- The number of bacteria listings, locations where bacteria concentrations reach levels unsafe for swimming, has increased 90% from 2006 to 2010. However, this increasing trend is likely due to a more thorough assessment of water quality data at California's fresh and saltwater beaches, rather than an increase in bacteria levels. The State's BEACH monitoring program does a thorough job of monitoring the coastal beaches most commonly used by the public and some counties are piloting rapid assessment methods to be able to more quickly assess whether bacteria levels have reached unsafe levels. In combination with recently installed electronic signs at some of the pilot locations, beach goers can be more quickly informed of beach closures due to high bacteria.
- Trash impairments have increased 76% from 2006 to 2010. The observed increasing trend is likely due to better reporting, often by the public, of trash problems in waters. Wildlife can be harmed by ingesting or becoming entangled in floating trash. California is working on a statewide Trash Policy to reduce trash impacts to local wildlife and reduce California's contribution to the Great Pacific Garbage Patch. Several cities have a ban, tax, or incentive program to reduce single-use plastic bags, Styrofoam containers, and other commonly discarded items which cannot decompose. Programs such as those, will make great improvements to reducing the problem of trash polluting lakes, river and the ocean.

- The numbers of listings showing pollutants in fish are at levels too high for safe human consumption has increased 24% from 2006 to 2010, with the greatest increases seen in mercury. The observed increasing trend is due to a recent effort to measure pollutants that bioaccumulate in sport fish in California's lakes and coastal waters. With this information California was able to issue advisories warning the public of the risks of consuming fish from certain lakes. Many of the pollutants causing impairment are no longer manufactured, such as DDT, and are slowly decreasing in concentration over time.
- Pesticides listings have increased 36% from 2006 to 2010. Much of this increase is due to more thorough monitoring required under the State's innovative Irrigated Lands Regulatory Program. This program is one of California's waiver programs that regulates nonpoint sources of pollution and is groundbreaking nationwide. It requires the agricultural community to limit pollutants in their discharges and conduct monitoring. Close collaboration between the Water Boards and the Department of Pesticide Regulation has helped to make gains in reducing pesticide discharges to surface and groundwater. As an example, along 79 miles of the Feather and Sacramento Rivers the pesticide diazinon is no longer polluting the waterway.